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EXAMINER

KORNAKOV, MICHAIL

ART UNIT

PAPER NUMBER

1746

DATE MAILED: 07/30/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/752,524

Applicant(s)

NISHI, KAZUYUKI

Examiner

Michael Komakov

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,9,10,12,13 and 15-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-8,11 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-18 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-14, provided in Paper No. 5, dated 10/08/2002, and the election of species as per claims 4, 7 and 11, provided in Paper No. 7, dated 01/06/2003, is acknowledged. Claims 2, 3, 9, 10, 12 and 13 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.
2. Claims 1, 4-8, 11 and 14 are examined on the merits.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 6-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The recited "hydrocarbon solution", as per claim 6 does not provide an enablement for solubility in aqueous media, as being lipophilic compounds

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1746

6. Claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The recited "hydrocarbon solution is alcohol" is indefinite, because by the virtue of "hydrocarbon definition" it is a compound that contains ONLY carbons and hydrogens.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 6 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishi (U.S. 5,868,864), which is an English equivalent of JP 9-208995, published 08/1997.

Nishi discloses a method for washing an object, such as an optical element, which steps are best depicted by claims 11 and 17 in col.9, namely:

first, dipping the object to be washed in a lipophilic agent;

second, dipping the object to be washed in an emulsifier;

third, dipping the object to be washed in a detergent;

fourth, dipping the object to be washed in water.

Art Unit: 1746

This anticipates the limitations of the instant claims 1, 6 (ambiguity and lack of enablement of claim 6 is discussed above) and 14. The emulsifier and/or detergent of Nishi is the media described in an intermediate step of the instant claim 1, i.e. being soluble in aqueous and non-aqueous solutions.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishi in view Sherman "Emulsion Science" (Handbook), Academic Press, 1968, page 150.

Nishi discloses the step of washing the optical object in the emulsifier and detergent. This step is used by Nishi for substituting and replacing the hydrocarbon

Art Unit: 1746

(lipophilic) wash with water wash, therefore, it is motivated by Nishi, that such intermediate wash with detergent/emulsifier should contain the compound having solubility in both phases, lipophilic and hydrophilic (see, for example Fig.2, especially col.3, lines 5-1).

Sherman provides Table VI on page 150 of surface active agents having specific values of HLB (hydrophilic lipophilic balance), among which are n-propanol and n-butanol, the compounds having average HLB values. Therefore, a person skilled in the art clearly motivated by the suggestions of Nishi, as to the purpose of substituting wash, would have found it obvious to utilize one of alcohols of Sherman as the detergent/surface active agent of Nishi based on its solubility in both phases. With regard to the iso-propanol of the instant claims, vs. n-propanol, cited in Shermans Table VI, it is noted that these compounds are two possible structural isomers. Structural similarities have been found to support a prima facie case of obviousness. See, e.g., In re Wilder, 563 F.2d 457, 460, 195 USPQ 426, 429 (CCPA 1977) (adjacent homologs and structural isomers).

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishi in view of JP 05266412.

Nishi is silent about ultrasonic agitation of a non-aqueous solution, as per claim 11. Ultrasonic agitation of cleaning liquids, both organic solvents and aqueous solutions is routinely utilized in cleaning processes, which is evidenced, for example, by JP'412, that teaches cleaning process for objects dipped into an ultrasonic tank, containing the

Art Unit: 1746

organic solvent to wash them with ultrasonic wave and finally they are cleaned with vapor of the organic solvent (See Abstract). Therefore, a person skilled in the art would have found it obvious to utilize the ultrasonic agitation of organic solvent in the non-aqueous step of Nishi in order to enhance the contact of the solvent with the object and, thus, to increase the effectiveness of cleaning.

13. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishi in view of Osano et al (U.S. 5,334,258).

The teaching of Nishi is different from instant claims 4 and 5 by not disclosing the drying step between the intermediate and water washing step. Osano discloses a washing method of optical article closely related to the method of Nishi and to the instantly claimed method. Practically Osano performs the same steps, and the reference to Osano provides the motivation to utilize the drying step as instantly claimed by teaching that the action of the washing liquid's surface tension causes the washing liquid to stay on the object resulting in defective washing, and a reduction of rinsing effect (col.2, lines 35-40). Therefore a person skilled in the art, motivated by teaching of Osano, would have found it obvious to perform drying between the detergent and aqueous steps of Nishi in order to better remove the residues left after the intermediate step and ensure the effective subsequent rinsing. The skilled artisan would also have reasonably expected that the use of isopropanol is beneficial, since the isopropanol is used in the detergent/substitute step of Nishi, and by employing it in the drying step,

Art Unit: 1746

one skilled in the art would have avoided additional chemicals and therefore additional contaminants in the process.

Therefore the combination of references renders claims 4, 5, 7, 8 and 11 prima facie obvious and properly rejected under 35 USC 103(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kornakov whose telephone number is (703) 305-0400. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (703) 308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872 9310 for regular communications and (703) 872 9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 2450.

M. Kornakov

Michael Kornakov
Examiner
Art Unit 1746

July 25, 2003